

U.S. ENVIRONMENTAL PROTECTION AGENCY
 POLLUTION/SITUATION REPORT
 San Juan River Response - Removal Polrep



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 Region IX**

Subject: **POLREP #7**
San Juan River Response

Shiprock, NM
Latitude: 36.8704828 Longitude: -108.7892506

To: Robert Wise, EPA Region 9

From: Kathleen Dillon, Situation Unit Leader

Date: 8/19/2015

Reporting Period:

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority:	Response Type:
Response Lead:	Incident Category:
NPL Status:	Operable Unit:
Mobilization Date:	Start Date:
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

1.1.2 Site Description

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

EPA Region 9 is focused on a stretch of the San Juan River extending from Farmington, NM to Mexican Hat, UT.

1.1.2.1 Location

San Juan County, NM and Navajo Reservation. The Animas River flows into the San Juan River at

Farmington, NM. After the Animas River meets the San Juan River, the San Juan River continues to flow west through parts of New Mexico, Colorado, and Utah.

1.1.2.2 Description of Threat

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The river is also used for recreational purposes, including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release reached the New Mexico border on August 8, 2015 where it eventually discharged into the San Juan River.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

EPA Region 9 is collecting and assessing water quality from the San Juan River from La Plata Highway in New Mexico to Mexican Hat in Utah. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

1.2 Incident Objectives

1. Safety

- Provide safe working environment for all response personnel.
- Identify safety issues and monitor adherence to Health and Safety Plan
- Ensure personnel receive adequate rest and time off

2. Sampling

- Daily water and sediment sampling from 11 designated locations along the San Juan River
- Sampling from Lake Powell
- synchronize sampling data and information with Area Command

3. Water Replacement

- Work with Navajo representatives to staff water points and organize distribution

4. Public Outreach

- Coordinate public forum at which Navajo tribal leaders and community members can address Incident Command representatives.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Daily operations are focused around gathering water and sediment samples from 11 designated locations in the San Juan River. The Glen Canyon ICP is overseeing sampling in the vicinity of Lake Powell.

The Unified Command has also identified a need on the Navajo reservation to provide water and feed for livestock.

2.1.2 Response Actions to Date

Sampling Branch

EPA Region 9 initiated water and sediment sampling efforts on August 9, 2015, to assess the impacts of the release at the Gold King Mine on the San Juan River. Starting on August 9, samples were gathered from the shoreline of the following 11 designated locations along the San Juan River:

New Mexico

San Juan River at LaPlata Highway (SJLP)
 PNM Intake (SJFP)
 San Juan River at Hogback (SJHB)
 San Juan River at Shiprock (SJSR)
 San Juan DS from Shiprock (SJDS)
 San Juan River at Four Corners (SJ4C)

Utah

San Juan River at McElmo Creek (SJME)
 San Juan at Montezuma Creek (SJMC)
 San Juan River at Bluff Bridge (SJBB)
 San Juan River at Mexican Hat (SJMh)
 McElmo Creek Tributary (MECT)

Sample totals are summarized below:

August 8 - 4 water samples (SJLP, SJFP, SJHB & SJSR)
 August 9 - 13 water samples (all sites)
 August 10 - 12 water samples, 11 sediment samples (all sites)
 August 11 - 13 water samples, 13 sediment samples (all sites)
 August 12 - 13 water samples, 13 sediment samples (all sites)
 August 13 - 12 water samples, 12 sediment samples (all sites)
 August 14 - 12 water samples, 12 sediment samples (all sites)
 August 15 - 12 water samples, 12 sediment samples (all sites)
 August 16 - 12 water samples, 12 sediment samples (all sites)
 August 17 - 12 water samples, 12 sediment samples (all sites)
 August 18 - 10 water samples, 10 sediment samples (did not sample at SJSR or SJDS)

There have been no requests for well samples and no requests for samples from diversion channels.

Community Relations Branch

Region 9 continues daily meetings at designated Navajo Chapters. Chapter meetings are summarized below:

8/10 - Oljeto, Aneth
 8/12 - Shiprock
 8/14 - Oljeto, Aneth
 8/15 - Hogback, Nenahnezad, San Juan, Upper Fruitland,
 8/16 - Mexcian Water, Gaadiiahi
 8/17 - No meetings conducted
 8/18 - Beclabito

Scheduled chapter meetings are as follow:

8/20 - Monument Valley
 8/21 - Navajo Mountain

Community Involvement Coordinators joined the ATSDR Health Educator at a Chapter meeting in Beclabito yesterday. This was EPA's first meeting in this location as a part of this emergency response. The meeting was attended by Beclabito Chapter officials, Council Delegate Amber Crotty, Dine College Professor Perry Charley, and around 30 community members. The main topics of questions/comments to EPA CICs were:

- Our current interpretation of data is very much inadequate to meet community needs
- Claims form (long term effects and red tape concerns)
- Effects to crops (losing crops and people won't buy existing crops)
- Continued discharge from Gold King Mine
- Long term plans to understand impact and remediate
- Shiprock water tanks and possible contamination

Perry Charley also provided comments about the adequacy of our sampling efforts and offered his assistance. The Grazing official would like us to return ASAP to provide an analysis of the data. More extensive notes are attached.

Water and Feed Delivery Branch

A summary of water tank delivery for use for livestock and agriculture is as follows:

8/13 - 11,000 gallons of water delivered to Hal Chita, UT, 7,000 gallons of water delivered to Shiprock, NM

8/14 - 12 tanks (each 16,000 gallons) staged throughout Shiprock chapter

8/15 - 13 tanks (each 16,000 gallons) staged throughout various chapters of Navajo Nation.

8/16 - no change

8/17 - no change

8/18 - no change

Tanks are located at the following positions:

Upper Fruitland Rodeo Grounds

Shiprock Rodeo Grounds

Gadiiaah Chapterhouse

Teec Nos Pos Chapterhouse

Mexican Water

Mexican Hat

Montezuma

Windmill 9T-227

Windmill 9T-225 (Red Mesa)

Windmill 01T-509

Windmill 02A-93

Anneth Chapter House

Monument Valley Welcome Center

A summary of feed delivered for livestock is as follows:

8/14 - 384 bales delivered to Gaadiiahi chapter

Further water and feed requests will be fielded by the Window Rock EOC with delivery coordination managed through the Farmington ICP.

Drinking Water System Impacts

No known water systems in Region 9 have been impacted.

Glen Canyon, Arizona ICP

The Lake Powell Branch is working with the City of Page, Arizona, regarding the reduced need for periodic sampling of its drinking water intake in the foreseeable future and is coordinating with the ICP in Farmington to ensure that any subsequent sampling is consistent with that in other communities. Yesterday, one sample was collected from the Page, AZ drinking water intake along Lake Powell (Page-081715-11). This sample was shipped to TestAmerica Irvine for analysis.

The Lake Powell Branch has been refining plans for the upcoming USGS/NPS14-day sampling expedition beginning at the end of this week.

The EPA will not be integrating its sampling efforts into the USGS/NPS Mercury study, instead EPA is focusing its sampling efforts on San Juan River Gold King Mine related water and sediment quality influences on Lake Powell. EPA is participating in this expedition because it is an excellent opportunity to gain access to multiple sampling locations not readily available without long-term planning, and it provides EPA with access to boats and sediment/depth sampling equipment not readily available in normal circumstances. The Lake Powell Branch is close to completing its estimates in support of a Resource Request to the ICP.

2.2 Planning Section

2.2.1 Anticipated Activities

Sediment and water sampling of the nine data points on the San Juan River will continue today. All samples will be gathered along the shoreline.

Farmington ICP members will not be conducting activities in the Shiprock Chapter until further notice. This includes samples being taken at the San Juan River at Shiprock (SJSR) and San Juan DS from Shiprock (SJDS), water and agricultural distribution needs and community outreach.

Sampling in the vicinity of Lake Powell will continue out of the Glen Canyon ICP. Sampling will recommence on Friday 21AUG15. The crew will embark on a 14 day float trip to collect a more robust sample set. The trip is in coordination with other agencies collecting data not related to this response.

A more robust water distribution system has been established throughout Navajo Nation. Water tanks are now staged at 13 total points throughout Navajo Nation with a capacity of 32,000 gallons of water at each location except for one location that has a capacity of 16,000 gallons.

Additional representatives from the EPA's community relations team have arrived at the Farmington ICP.

2.2.1.1 Planned Response Activities

Continued daily water and sediment sampling is planned.

Refilling water tanks staged throughout Navajo Nation will continue as needed via requests through the Window Rock EOC.

Community Outreach Branch at Farmington ICP will continue outreach with Navajo nation chapters.

2.2.1.2 Next Steps

2.2.2 Issues

On 17AUG15, at approximately 1130, seven members of the Farmington ICP response team were approached in the farmland area of Shiprock by a member of the Navajo Nation. The individual is in opposition to the response operations of Farmington ICP in regards to water and feed deliveries in the Shiprock Chapter. During the confrontation, the response personnel were threatened by being told their vehicles "would be stoned". They were also intimidated by a second vehicle that showed up in support of the individual. The response personnel listened to what the individual had to say and eventually left.

At approximately 1215, another incident occurred with the same individual at the bridge in Shiprock. There, the individual argued with 2 EPA employees and threatened to break their equipment. The individual left after a few minutes. In both cases the response personnel returned to the Farmington ICP and were unharmed.

An investigation is being conducted by the Navajo Department of Criminal Investigation.

Due to these events, for the safety of our response personnel, operations will be placed on hold in the Shiprock Chapter until the threats in this chapter are addressed.

2.3 Logistics Section

Requests from Navajo Nation for agriculture and livestock water and feed will be submitted to the Window Rock EOC via an ICS-213RR. Once signed, the request will be forwarded to the Farmington ICP where it will be processed.

2.4 Finance Section

2.4.1 Narrative

Yesterday, there was a burn rate of \$6,805.19 with a weekly burn rate of \$47,636.30 for the ERRS contract through EQM (Environmental Quality Management, Inc.). A total of \$250,600.00 is committed for upcoming operations.

START / Weston burn rate for 8/17 was \$40,122. Daily burn rate is estimated to continue to be around \$40,000. This figure includes all overhead, activities conducted in the field and lab analysis.

2.5 Other Command Staff

2.5.1 Safety Officer

With weather being forecasted into the 90s, hydration is of paramount importance. Additionally, much of the terrain surrounding the river is uneven and rocky. Responders should transit these areas with care.

While transiting throughout the region, responders should be mindful of the potential for contact with wildlife. Scorpions, snakes, and other similar animals raise a potential for injury.

2.5.2 Liaison Officer

Liaison officers are continuing outreach with Navajo community members and representatives of the Navajo Tribe.

2.5.3. Weather Forecast

Weather forecast for Wednesday, August 19

FARMINGTON AREA

Today

A mix of sun and clouds with a high of 88, low of 53 and 0% chance of precipitation. Wind coming out of the west at 20 miles per hour.

Tonight

No precipitation tonight. Partly cloudy, with a low around 53.

Tomorrow

Sunny with a high of 91, low of 58. No chance of precipitation.

3. Participating Entities

3.1 Area Command

EPA Region 9 is coordinating with EPA Regions 6 and 8, Navajo Nation, and the states of Colorado, New Mexico, Utah, and Arizona. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and New Mexico Environmental Department are providing assistance to community water systems and closely monitoring the situation. EPA Region 9 has contacted

the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation and is currently working with Navajo liaisons.

3.2 Unified Command and Cooperating Agencies

The UC includes EPA Region 9 and United States Coast Guard. Bret Moxley has assumed the role of Incident Commander.

4. Personnel On Site

EPA - 10
EPA START - 13
ERRS - 5
USCG - 8
Navajo Liaisons - 2

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

www.epa.gov/goldkingmine

7. Situational Reference Materials

No information available at this time.